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09/500,086	02/08/2000	Masayuki Yamasaki	43889-916	2111

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EXAMINER

KNAPP, JUSTIN R

ART UNIT

PAPER NUMBER

2183

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/500,086

Applicant(s)

YAMASAKI ET AL.

Examiner

Justin Knapp

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/8/00, 6/18/02, 9/28/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 1- 3, 5, 7, 9-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Papers Submitted

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Transmittal of Certified Priority Document as received on 02/08/00; Information Disclosure Statement as received on 02/08/00; Supplemental Information Disclosure Statement as received on 09/28/01; and Information Disclosure Statement as received on 06/18/02.

Priority

2. Acknowledgement is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

4. The disclosure is objected to because of the following informalities:

- a. On page 6, lines 8-9, it indicates a "program" is a group of instructions read out one by one that is stored in the instruction register. Lines 14-15 state an "instruction set" is provided from the instruction register. It is assumed that

“program” and “instruction set” are describing the same set of instructions from the instruction register. Please keep terminology consistent throughout the disclosure by switching “program” in line 9 to -- instruction set --.

- b. On page 7, line 16, please change the line from the stated, “been defined by the instruction-specifying field for” to, -- been defined by the instruction-specifying field as the number of --.

Appropriate correction is required.

Claim Objections

5. Claims 1- 3, 5, 7, 9, and 11 objected to because of the following informalities:

- a. The phrase, “which number has been defined by the instruction-specifying field for instructions succeeding the execution control instruction” should be replaced with -- which number has been defined by the instruction-specifying field as the number of instructions succeeding the execution control instruction-- where needed.

Appropriate correction is required.

6. Claims 1-3, and 7 are objected to because of the following informalities:

- a. The phrase, “the number of instructions to be executed only conditionally” like in claim 1, lines 9-10 is used. It is unclear to the examiner what conditions need to be met for a number of instructions to be executed when the language, “only conditionally”, is used.

Appropriate correction is required.

7. Claim 5 is objected to because of the following informalities:

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a. The claimed “said number of instructions” is defined as having two different definitions in the same claim. On line 9, “said number of instructions” is defined as a first set of conditionally executable instructions. On lines 16-17, “said number of instructions” is defined as a second set of conditionally executable instructions.

b. The “number” in said number of instructions is also defined twice. Lines 6-8 first define “number” as the number of instructions succeeding the execution control instruction. Lines 13-16 define “number” as the number of instructions succeeding the first set of conditionally executable instructions.

Please re-write the claim in a way that will clearly distinguish a set or number of instructions that make up a first set of conditionally executable instructions from another set or number of instructions that make up a second set of conditionally executable instructions.

8. Claims 9-12 are objected to because of the following informalities:

a. In each claim, the phrase “if the execution condition specified by associated one of the...” is used. Please change to -- if the execution condition specified by an associated one of the...--.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claims 1-4, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoge, United States Patent Number 5,930,158 (fig 1 and 7A, column 10, lines 30-67, column 11 lines 1-67, and column 12, lines 1-15).

11. Referring to claim 1, Hoge has taught:

- a) a means for providing a set of instructions including an execution control instruction (column 10, lines 30-37, fig 1), the execution control instruction containing a condition field and an instruction-specifying, the condition field specifying an execution condition (fig 1, element 120 and column 10, lines 41-44), the instruction-specifying field defining, in binary code, the number of instructions to be executed just when the execution condition is satisfied (fig 1, element 130 and column 10, lines 46-49);
- b) means for deciding whether or not the execution condition that has been specified by the condition field is satisfied (column 10, lines 50-67 and column 11, lines 1-44, fig 7A); and
- c) means for determining based on the outcome of the decision whether or not said number of instructions, which number has been defined by the instruction-specifying field as the number of instructions, should be nullified (column 11, lines 45-65, fig. 7A).

12. Referring to claim 2, Hoge has taught a method comprising the steps:

- a) providing an execution control instruction, the execution control instruction containing a condition field and an instruction-specifying field, the condition field specifying an execution condition (fig 1, element 120 and column 10, lines 41-44), the instruction-specifying field defining, in binary code, the number of instructions to be executed just when the execution condition is satisfied (fig 1, element 130 and column 10, lines 46-49);

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- b) deciding whether or not the execution condition that has been specified by the condition field is satisfied (column 10, lines 50-67 and column 11, lines 1-44, fig 7A); and
- c) determining based on the outcome of the decision step b) whether or not said number of instructions, which number has been defined by the instruction-specifying field as the number of instructions succeeding the execution control instruction, should be nullified (column 11, lines 45-65, fig. 7A).

13. Referring to claim 3, the rejections of claim 2 apply to claim 3 since claim 3 is dependent on claim 2. Furthermore, Hoge has taught the method of claim 2:

- a) wherein the condition field is a single field for specifying the execution condition (fig 1, element 120 and column 10, lines 41-44), and
- b) wherein the instruction-specifying field is a single field for defining the instruction number (fig 1, element 130 and column 10, lines 46-49), and
- c) wherein the step c) comprises the sub-step of regarding said number of instructions as instructions to be executed just when the execution condition is satisfied, and nullifying the conditionally executable instructions if the execution condition that has been specified by the condition field is not satisfied (fig 7A, column 11, lines 27-65).

14. Referring to claim 4, the rejections of claims 2 and 3 apply to claim 4 since claim 4 is dependent on claims 2 and 3. Furthermore, Hoge has taught the method of claim 3:

- a) wherein the step c) further comprises the sub-step of executing the conditionally executable instructions if the execution condition that has been specified by the condition field is satisfied (fig 7A, column 11, lines 40-44).

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15. Referring to claim 9, the rejections of claim 2 apply to claim 9 since claim 9 is dependent on claim 2. Furthermore, Hoge has taught a method of claim 2:

a) wherein the condition field includes multiple condition sub-fields, each specifying a single associated execution condition (column 5, lines 1-20 and fig 1, element 120 and 170 and column 10, lines 41-44), and

b) wherein the instruction-specifying field is a single field for defining the instruction number (fig 1, element 130 and column 10, lines 46-49);

c) wherein the step c) comprises a plurality of sub-steps wherein each said sub-step, said number of instructions, which number has been defined by the instruction-specifying field as the number of instructions succeeding the execution control instruction, are regarded as conditionally executable instructions, and, if the execution control condition specified by an associated one of the condition sub-fields is not satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are nullified (column 12, lines 16-67, fig 7C).

16. Referring to claim 10, the rejections of claims 2 and 9 apply since claim 10 is dependent on claims 2 and 9. Furthermore, Hoge has taught a method of claim 9 wherein the step c) comprises a plurality of sub-steps, wherein in each said sub-step, if the execution condition specified by an associated one of the condition sub-fields is satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are executed (column 12, lines 16-67, fig 7C).

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17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 5-8, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoge.

19. Referring to claims 5 and 6, the rejections of claim 2 apply since 5 and 6 are dependent on 2. Hoge taught a skip instruction wherein the condition field is a single field for specifying the execution condition (column 10, lines 41-44) and wherein the instruction-specifying field is a single field for defining the instruction number (column 10, lines 46-49). Hoge lacks a teaching wherein there is a first set and a second set of conditionally executable instructions wherein the first set of conditionally executable instructions is nullified and the second of set of conditionally executable instructions is executed if the execution condition is not satisfied or the first set of conditionally executable instructions is executed and the second of set of conditionally executable instructions is nullified if the execution condition is satisfied. Hoge has taught a method wherein two skip instructions can be used to create IF/ELSEIF/ELSE logical sets of instructions (column 12, lines 16-67, figure 7C). One skip instruction is used to specify the condition and number of instructions to skip or execute for the IF instruction set. If that condition is satisfied or not satisfied, the IF instruction set is executed or nullified respectively and the ELSEIF instruction set is nullified if the IF instruction set is executed or evaluated using a second skip instruction to specify the condition and number of instructions to nullify or execute for the ELSEIF instruction set. If neither the IF or ELSEIF instruction sets are satisfied, both

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instruction sets are nullified and the ELSE instruction set is executed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the system of Hoge by removing the ELSEIF set of instructions thus eliminating the need for a second skip instruction, keeping the IF/ELSE structure to accommodate for a first and second set of conditionally executable instructions. Doing so would have allowed for use of a system incorporating Hoge's teachings using one skip instruction with a condition field and a instruction specifying field wherein there is a first set and a second set of conditionally executable instructions wherein the first set of conditionally executable instructions is nullified and the second of set of conditionally executable instructions is executed if the execution condition is not satisfied and the first set of conditionally executable instructions is executed and the second of set of conditionally executable instructions is nullified if the execution condition is satisfied. One of ordinary skill would have been motivated to do this because it eliminating a skip instruction would decrease the number of instructions to be executed thus improving the throughput of the system rather than using two skip instructions, one for each set of conditionally executable instructions.

20. Referring to claims 7 and 8, the rejections of claim 2 apply since 7 and 8 are dependent on 2. Hoge taught a skip instruction wherein the condition field is a single field for specifying the execution condition (column 10, lines 41-44). Hoge lacks a teaching wherein the instruction-specifying field contains first and second instruction-specifying sub-fields, which respectively define first and second numbers of instructions to be executed and wherein the first number of instructions, which number has been defined by the first instruction-specifying sub-field as the number of instructions succeeding the execution control instruction, as a first set of conditionally

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executable instructions, and nullifying the first set of conditionally executable instructions and executing the second set of conditionally executable instructions if the execution condition specified by the condition field is not satisfied; and regarding the second number of instructions, which number has been defined by the second instruction-specifying sub-field for instructions succeeding the first set of conditionally executable instructions, as a second set of conditionally executable instructions, and nullifying the second set of conditionally executable instructions and executing the first set of conditionally executable instructions if the execution condition specified by the condition field is satisfied. Hoge has taught a method wherein two skip instructions can be used to create IF/ELSEIF/ELSE logical sets of instructions (column 12, lines 16-67, figure 7C). One skip instruction is used to specify the condition and number of instructions to skip or execute for the IF instruction set. If that condition is satisfied or not satisfied, the IF instruction set is executed or nullified respectively and the ELSEIF instruction set is nullified if the IF instruction set is executed or evaluated using a second skip instruction to specify the condition and number of instructions to nullify or execute for the ELSEIF instruction set. If neither the IF or ELSEIF instruction sets are satisfied, both instruction sets are nullified and the ELSE instruction set is executed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to eliminate the two skip instructions taught by Hoge and use one skip instruction having sub-fields in the instruction-specifying field specifying the number of instructions to execute for each instruction set in a similar system wherein there are only a first and second set of instructions to be conditionally executed. One of ordinary skill would have been motivated to do this because eliminating a skip instruction would decrease the number of

instructions to be executed thus improving the throughput of the system rather than using two skip instructions, one for each set of conditionally executable instructions.

21. Referring to claims 11 and 12, the rejections of claim 2 apply since 11 and 12 are dependent on 2. Hoge has taught a method of claim 2, wherein the condition field includes multiple condition sub-fields, each specifying a single execution condition (column 5, lines 1-20 and fig 1, element and 120 and 170 and column 10, lines 41-44). Hoge lacks a teaching wherein the instruction-specifying field includes multiple instruction-specifying sub-fields corresponding to the respective condition sub-fields, each said instruction-specifying sub-field defining an associated number in binary code, and wherein the step c) comprises a plurality of sub-steps wherein each said sub-step, said number of instructions are regarded as conditionally executable instructions, and if the execution condition specified by an associated one of the condition sub-fields is not satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are nullified or if the if the execution condition specified by an associated one of the condition sub-fields is satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are satisfied. Hoge has taught a method wherein two skip instructions can be used to create IF/ELSEIF/ELSE logical sets of instructions (column 12, lines 16-67, figure 7C). One skip instruction is used to specify the condition and number of instructions to skip or execute for the IF instruction set. If that condition is satisfied or not satisfied, the IF instruction set is executed or nullified respectively and the ELSEIF instruction set is nullified if the IF instruction set is executed or evaluated using a second skip instruction to specify the condition and number of instructions to nullify or execute for the ELSEIF instruction set. If neither the IF or ELSEIF instruction sets are satisfied, both

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instruction sets are nullified and the ELSE instruction set is executed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Hoge. Doing so one of ordinary skill would eliminate the need for multiple skip instructions each having a different instruction-specifying field to be associated with a corresponding condition field and use one skip instruction having multiple sub-fields in the instruction-specifying field specifying the number of instructions to be conditionally executed based on an associated condition specified by multiple sub-fields in the condition field. One of ordinary skill would have been motivated to do this because eliminating a skip instruction would decrease the number of instructions to be executed thus improving the throughput of the system rather than using multiple skip instructions.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made. Applicant must also show how the amendments avoid such references and objections. See 37 CFR § 1.111(c).

The admitted prior art (Japanese Patents 10-49368 and 07-253882) in the background of the disclosure appears to read on applicant's invention. The examiner respectfully requests the applicant to clearly explain the differences between the applicant's invention and the admitted prior art in order for the examiner to complete the best prior art search possible.

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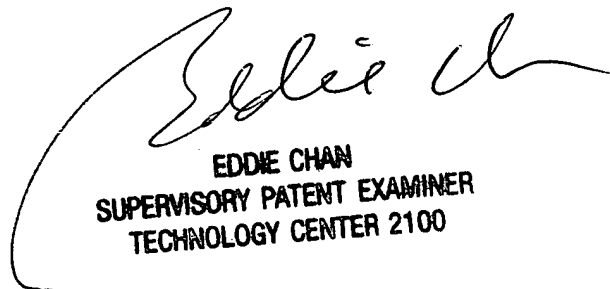
23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Knapp whose telephone number is (703) 308-6132. The examiner can normally be reached on Mon - Fri 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (703) 305-9712. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Justin Knapp
Examiner
Art Unit 2183

October 1, 2002



EDDIE CHAN
SUPERVISORY PATENT EXAMINER
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